

ARCHITECTURE

❖ VOLUME LXIX

MARCH 1934

NUMBER 3 ❖



Duke University

AN INSTITUTION OF LEARNING DEVELOPED AS A WHOLE RATHER THAN EVOLVED, THE PHYSICAL SIDE OF WHICH WAS DESIGNED BY HORACE TRUMBAUER, ARCHITECT

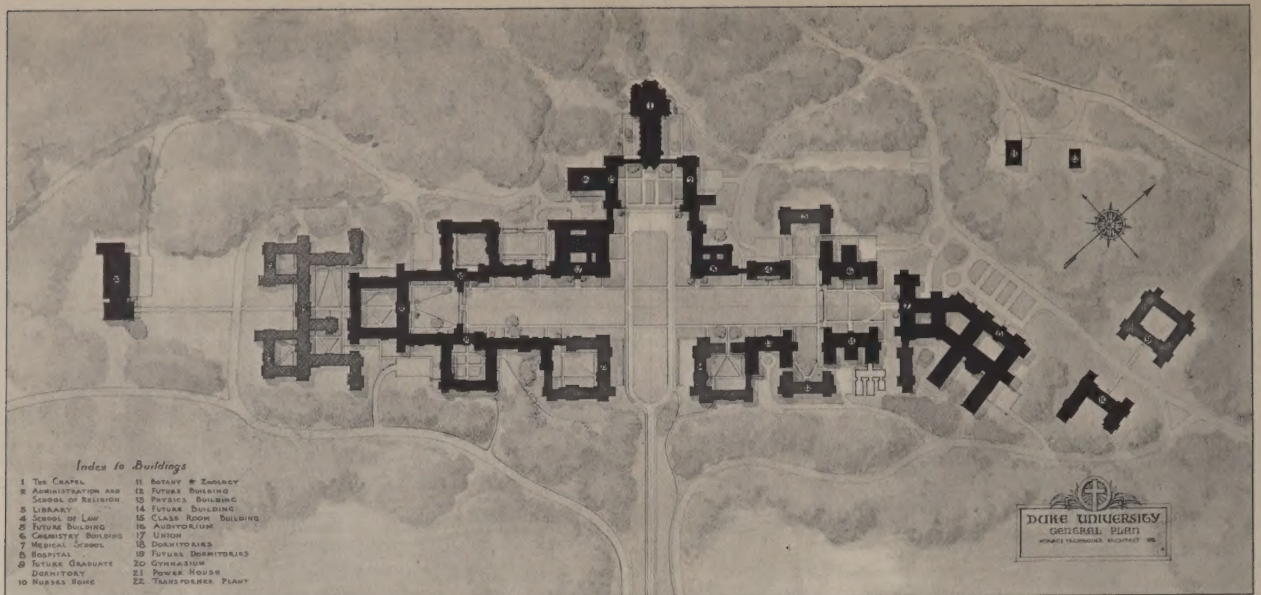
Photographs by Charles E. Knell

THE story of Duke University really goes back to the days of the Civil War, when Sherman marched to the sea. The soldiers who passed through Durham, N. C.—Yankees and Rebs alike—snatched up packets of tobacco mixed by John Ruffin Green for his neighbors. Thereafter, the war over, orders for Durham tobacco flowed back to North Carolina in an ever-increasing demand. The Dukes followed to share in Durham's new-found affluence as a tobacco centre. James B. Duke, son of Washington Duke, has now given his neighbors, through an outright gift of forty million dollars and an additional forty million bequeathed in his will for endowment, a centre of learning.

With nearly five thousand acres as a site, and a clean slate on which to work, the founder and the architect proceeded upon the assumption that what we call Collegiate Gothic best

fitted our educational traditions and aspirations for an inspiring environment, at the same time meeting the manifold practical requirements of a modern university.

Trinity College, in a sense the progenitor of Duke University, has been absorbed completely by the latter, to provide what is now known as the Women's College. A Medical School and a Hospital form what may become the backbone of the University, with other buildings given over to the Library, School of Law, School of Chemistry, School of Botany and Biology, School of Religion. Dominant in the group, however, is the Chapel. Upon its tower, its fifty-bell carillon, its wood carving and stained glass, its organs, have been lavished the most skillful craftsmanship, the choicest materials, that the builders could command. Occupying the focal point of the plan, its tower terminating a long vista following the main driveway, the



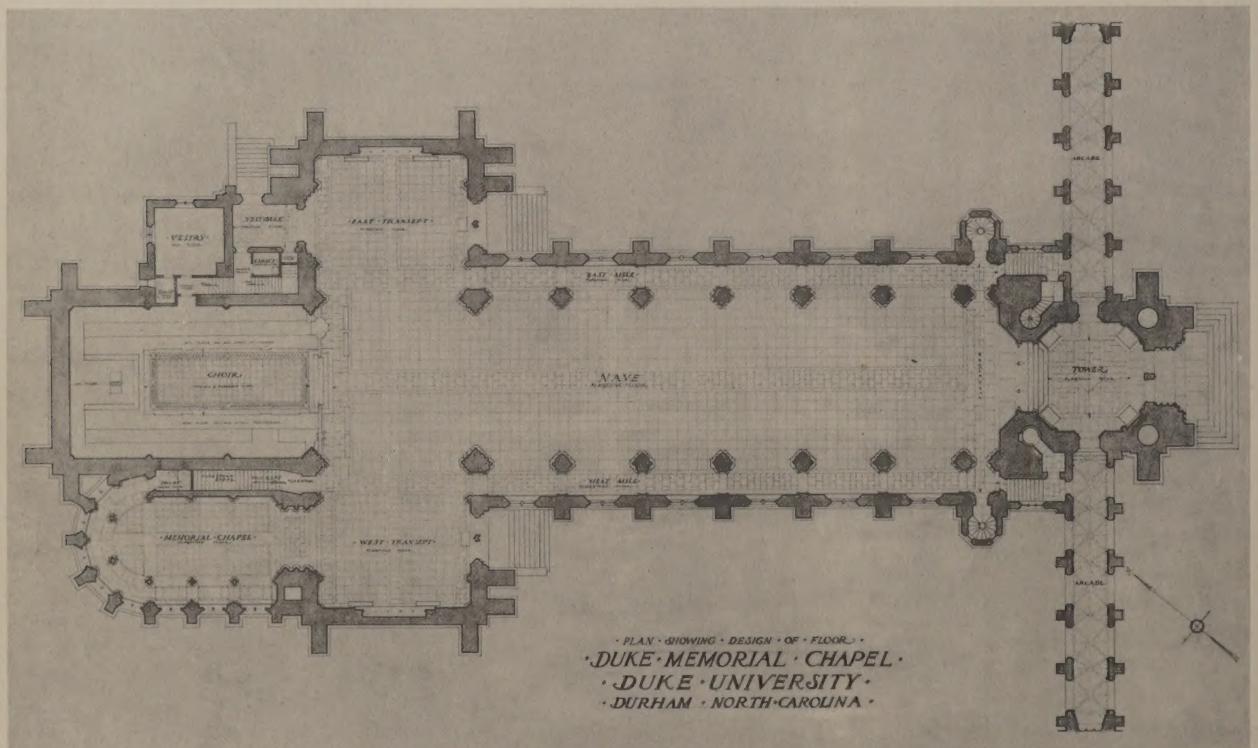
Plot plan of the University, in the location of which the architect was free to choose from the wide variety of a tract enclosing nearly five thousand acres. The cross-hatched buildings represent future extensions

Chapel reflects the importance laid upon things of the spirit in the academic life.

It has required only four years for the completion of the work indicated on the block plan. The buildings were erected by the Duke Con-

struction Company. For the engineering work, the W. S. Lee Engineering Corporation was responsible, an organization of Charlotte, N. C. Mr. A. C. Lee, vice-president of this corporation, was in charge of the work of construction.

Below, plan of the Chapel, which is the dominant element in the whole scheme. The building is 275 feet long, 63 feet over the side aisles, and 121 feet across the transepts. The nave itself is 38 feet wide and 73 feet high





On the dormitory terrace, from the archway of the southeast dormitory looking toward the similar quarters across the court

« ARCHITECTURE »



A view down the southwest side of the campus from the dormitories on the upper level. The building at the end of the campus is the Medical School

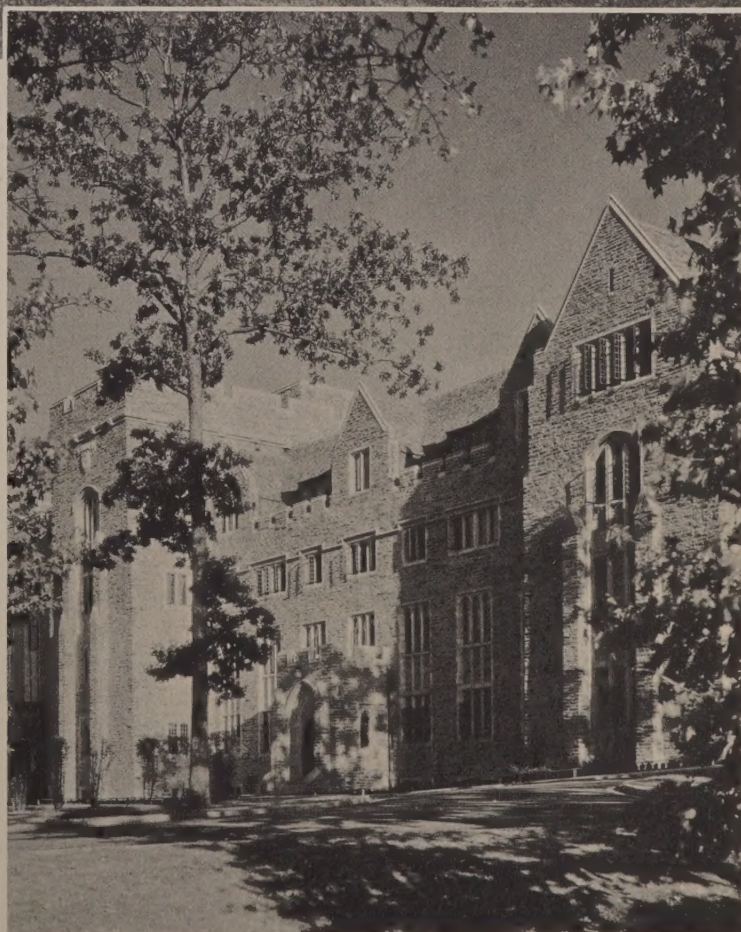


The Kinlock Tower, on the main axis of the campus at its southwest end

« ARCHITECTURE »



Looking along the northwest side of the campus from the Medical School. The buildings in the foreground are the School of Law with, just beyond it, the Library



The Hospital, showing the entrance to the out-patient wing, as lighted by the late afternoon sun

« ARCHITECTURE »



The Medical School quadrangle at the northeastern end of the campus. In the centre, the Medical School; at left, the Chemistry Building



The Medical School, as seen looking down into the service courtyard. The stone used throughout the group is a warm yellow color, quarried from the nearby hills, trimmed with varying buff limestone

« ARCHITECTURE »



The dormitory group at the southwest end of the campus. Throughout the group the roofs are made of antique tile in colors to harmonize with the local stone and limestone



The Hospital as seen looking across its main façade facing the northwest

« ARCHITECTURE »



The Chapel tower as seen in a view along the northeast side. It contains a carillon of fifty bells, executed by John Taylor & Company of England, and is arranged to be played by hand or by music rolls

« ARCHITECTURE »



Front view of the Chapel. Its main entrance is on the transverse axis of the campus, always in sight as one approaches through the long driveway



The chancel end of the Chapel, with its Memorial Chapel nestling between choir and transept. In one of these pinnacles a microphone picks up the carillon music to bring it inside the Chapel

On the facing page, the nave and choir. The stained glass was designed and executed by G. Owen Bonawit

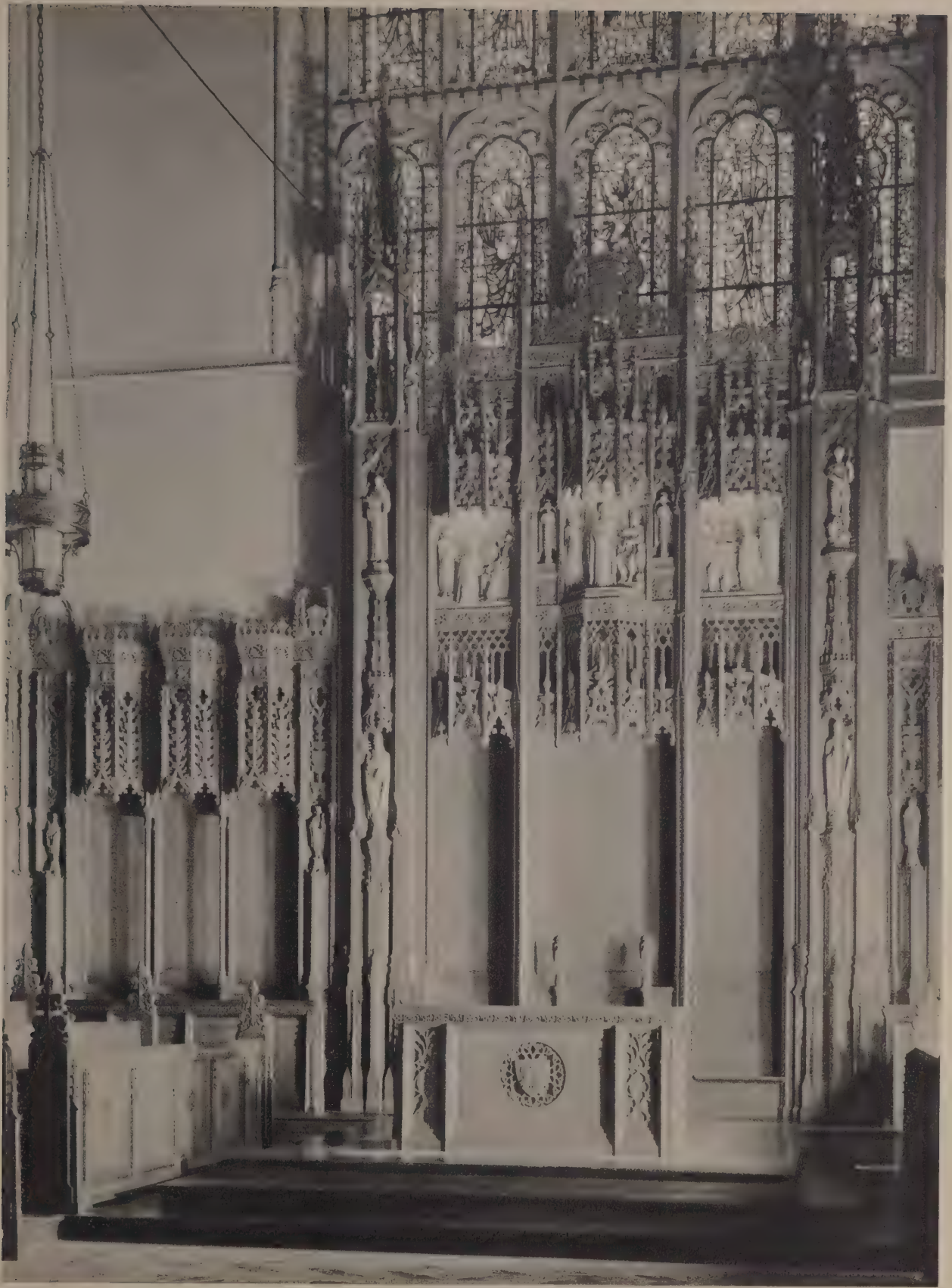
◀ ARCHITECTURE ▶





Looking through the wrought-iron screen (craftsmanship by William H. Jackson Company) separating the choir from the Memorial Chapel

« ARCHITECTURE »



Detail of the reredos. The three sculptured panels represent Christ with the Doctors in the Temple, Christ before Pilate, and the Entombment. Woodwork and carving executed by Irving & Casson—A. H. Davenport Company

◀ ARCHITECTURE ▶



*Detail of the choir stalls, with
the organ case above at the
left, and organ console un-
der it*

*On the facing page, the choir as seen
from the north transept, showing
half of the organ, the lectern at left,
the pulpit at right*





Front entrance of the Chapel. Above the arch in the centre is the figure of Francis Asbury, with Whitfield and Coke on the sides. In the tympanum over the doors is the figure of John Wesley. Sculptures and stone carving by John Donnelly

« ARCHITECTURE »



Color in Stone

By Eugene Clute

AFTER having been practically a lost art for more than two thousand years, polychromy on stone sculpture has once again become a part of architecture in Lee Lawrie's monumental main entrance to the seventy-story R. C. A. Building in Rockefeller Center. This is a rebirth rather than a revival, for it shows a fresh esthetic development from the practice of the Greeks of the fourth and fifth centuries B.C., and the technique is of our own day.

The chief feature is a relief of heroic scale upon the sloping limestone surface over the tall central opening into the recessed entrance loggia. It shows "Wisdom," a venerable, bearded figure, compass in hand, describing the orbits of heavenly bodies in space. The cosmos is represented by a sculptural abstraction in the moulded glass wall below—a bridging of materials without a break in composition. At the tops of the flanking openings are reliefs representing "Sound" and "Light," while a sound-wave motive and the ancient sun symbol appear in the glass below them.

The colors have been confined to the background, with wise restraint, the figures being left in the natural color of the stone, save for a few touches. The background at the top of the central panel is of a color that resembles Indian red but having more life. It retires, yet it supplies a note of richness and vigor. The clouds just below are in a light yellow edged with a soft blue. They advance slightly. The lower clouds, in a light gray-blue and a deeper tone of the same color, advance more strongly, but keep their place in the background. The glory above the head of Wisdom is in gold and the hair is in a brown-black with touches of gold. The pupils of the eyes are gold and there is gold upon the edges of the clouds. The plain surface below the figure is in light yellow with a band of abstract ornament painted in the various colors that are seen above. In the reliefs at the sides the scheme of colors is the same. The handling of the polychromy is admirable, for it gives the requisite interest and beauty to the background, yet brings the figures into prominence and enhances the charm

of their modelling. This is due to the artistry of Leon V. Solon, who was the consultant for color.

The solution of the problem of carrying out this polychrome treatment, in a medium capable of meeting all of the requirements, was entrusted to Harold Rambusch. After conducting extensive researches, he employed a method of impregnation with mineral colors that leaves a dull surface without a film and that does not obscure the texture of the stone. The pigments, together with a fixative which serves also as the vehicle, sink into the stone. Because of their nature and the way in which these substances are chemically related to one another, they form silicates in the pores of the stone, becoming a homogeneous part of it and hardening it. They do not seal the pores, however, but permit the absorption and discharge of moisture. There is, therefore, no tendency to peel, scale or powder off or to chip under the pelting by hailstones—one of the most important things to consider in this climate. The colors are fast to light, to the action of the weather, and are fireproof. As both pigments and binder are purely mineral substances, there is nothing to favor fungus growth, mildew or anything of the kind. The colors may be expected to last as long as the surface of the stone itself, which they penetrate to a considerable depth.

This method of coloring and protecting stone, concrete, brick, plaster, and other structural materials has been used extensively in Europe for many years, for utilitarian purposes. It has satisfactorily withstood exposure under the most severe conditions upon lighthouses and breakwaters, where the sea and rainstorms have beaten upon it, where it has been coated with ice and exposed to the summer sun and alternately wet and dry.



The materials consist of certain mineral pigments in dry powder form, and a thin almost colorless liquid, which are mixed together just before application. The dry powder is poured into the liquid, the mixture being stirred during the operation. It is then strained through several thicknesses of cheesecloth, to remove any lumps, and applied with a bristle brush in very much the same way as oil paint, but with more care. The brushes have rather longer, harder bristles than those used for oil paint.

In this case a priming coat and two coats of

color were used. The primer is of the fixative reduced with cold water, and the other two coats are of pigment and fixative, the first coat containing a higher proportion of fixative than the finish coat.

Different kinds of stone and other substances vary in their power of absorption, and this should be tested in every instance by applying the mixtures to samples of the material and noting at what rate they sink in. Limestone and sandstone are highly absorbent, while marble is only slightly so. This treatment can be applied to brick, plaster, wood, metal and glass. It renders wood fire-resistant.



If the stone has been repaired by filling in with some other substance or if there are freshly plastered patches in plaster work, these spots should be painted with a mixture of slaked lime and fresh hand-skimmed milk (not machine-skimmed milk), after the priming coat, and if necessary after the first coat of color, so that spots, stains or cloudy places may not appear in the finished work. A chemical substitute can be had for this milk-lime mixture.

Before priming, the work must be thoroughly cleaned with a stiff scrubbing brush, to remove all of the stone dust left by the carvers' tools. If any streaks of dirt or stains have been formed by water running down the building they should be removed with a wire brush. When oil-painted surfaces are to be treated, the paint must be completely removed. A special oil paint remover is used, consisting of a paste that has strongly caustic properties, applied with a trowel or float and left on until the paint is loosened, when the remover and paint are scraped off.

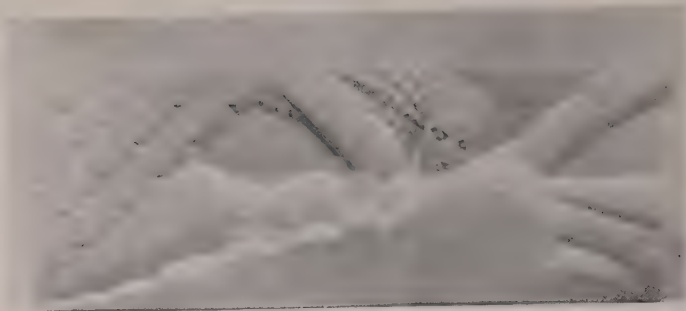
This method of polychrome treatment, in addition to its usefulness in new work, affords an excellent means of giving interest and freshness to old buildings, many of which have carved stone detail that might well be brought out with color. Buildings of classic design especially afford an opportunity, since color played a part in the architecture which inspired them.

Naturally, color must be used with discretion; it is only too easy to overdo it, not only in area but in color relationships. It must be skillfully applied in a suitable medium or the results will prove disappointing. But this example has proved that nothing need stand in the way of either esthetic or technical success in polychromy on stone sculpture.



Background at top, Indian red; upper clouds, light yellow edged with soft blue; lower clouds, light gray-blue and a deeper tone of same color. Above Wisdom's head the channel rays are in gold; the hair, brown-black with touches of gold; pupils of the eyes, gold, and there is gold on the edges of the clouds. Below the figure the plain surface is light yellow with the band of abstract ornament repeating the various colors above

"Wisdom," compass in hand, describing the orbits of heavenly bodies in space. This is the central opening of three which form the eastern axial entrance to the R. C. A. Building in Rockefeller Center. The sculpture is by Lee Lawrie; color consultant, Leon V. Solon; architects, Reinhart & Hofmeister; Corbett, Harrison & McMurray; Hood & Fouilhoux



*Above, Lee Lawrie's models for the two openings flanking the central one—"Wisdom."
Below are the openings as completed, the two panels representing "Light" and "Sound."
The colors used here are the same as those in the central panel*

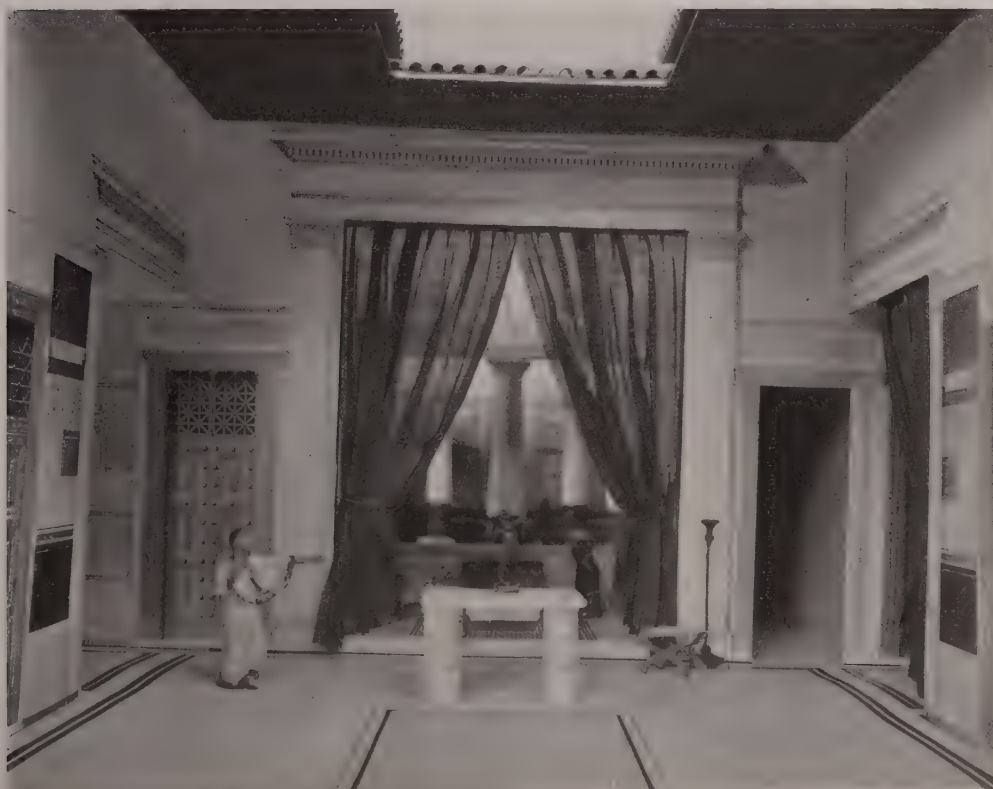




The front is simplified from the House of Sallust, and shows two shops designed to be rented to outsiders. At the bottom of the page the atrium

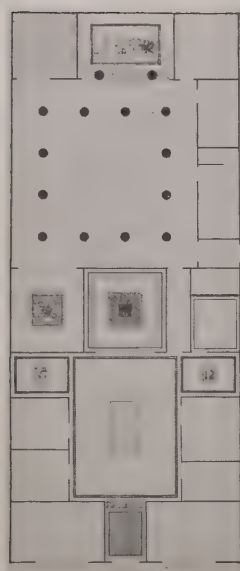
Model of a Pompeian House

University Museum, Philadelphia, has built this cardboard model from drawings by George B. Roberts and Mrs. Loring Dam—for use in schools. The model is collapsible. Typical of the domestic architecture of the upper class, the house might have been built before 80 B. C., with alterations between then and the eruption of 79 A. D.





The peristyle, in which the walls are from the "House of the Tragic Poet," decorated in the fourth style



In the plan there is shown a typical division into two parts: the front half centring around the atrium, and the more private rooms grouped around the open peristyle. The mosaics indicated on the plan are taken from actual examples.

It will be understood that the walls are here shown in the mere thickness of the cardboard, and not as in actual construction





The Society of Colonial Wars in the State of New Jersey has erected this gateway from the design and under the supervision of Walter B. Chambers, architect. Local stone has been used, with a coping and post caps of limestone. One of the memorial tablets and the bronze eagles were added by the



Photographs by

Society of Colonial Dames of America, also from Mr. Chambers's designs. The gateway commemorates the bicentenary anniversary of the birthday of George Washington and the spot hallowed by his stroke of military genius in the crossing of the Delaware on Christmas night, 1776

Richard Averill Smith

Memorial Gateway, Washington's Crossing Park, N. J.

BOOK REVIEWS

THE REBUILDING OF BLIGHTED AREAS.

A Study of the Neighborhood Unit in Replanning and Plot Assemblage. By CLARENCE ARTHUR PERRY. Architectural and Planning Studies under the direction of C. EARL MORROW. Foreword by LAWRENCE M. ORTON. 59 pages, 6½ by 11 inches. Illustrations from photographs and drawings. New York: 1933: Regional Plan Association, Inc., 400 Madison Avenue. \$2.

Mr. Perry speaks under the ægis of the Russell Sage Foundation, pointing out once more with emphasis the necessity for rebuilding the neighborhood unit upon an area large enough to permit the economies of mass reconstruction, to establish its own neighborhood atmosphere, and to provide the amenities of light, air, and space, all seldom available in cities.

FIRE TESTS OF COLUMNS PROTECTED WITH GYPSUM.

By NOLAN D. MITCHELL. 19 pages, 6 by 9 inches. Illustrations from photographs and diagrams. Research Paper RP563. Pamphlet binding. Washington: 1933: U. S. Department of Commerce, Bureau of Standards. 5 cents.

OLD CHARLESTON.

Twenty-four Woodcuts. By CHARLES W. SMITH. Introduction by HERBERT RAVENEL SASS. 24 pages, 9½ by 12½ inches. Richmond, Va.: 1933: The Dale Press. \$6.

The soul of Charleston is brought nearer to the understanding of some of us by photographs, to others by inspired descriptions, to others through the pencil, pen, and graver. The Dale Press has put these woodcuts of Mr. Smith's into a particularly delectable form, and there are those to whom the bold black and white of these blocks will bring, more closely than other arts, the heart of historic Charleston.

PAINTS, VARNISHES AND CONTAINERS.

Simplified Practice Recommendations R144-32. 14 pages, 6 by 9 inches. Pamphlet binding. Washington: 1933: U. S. Department of Commerce, Bureau of Standards. 5 cents.

A. S. T. M. STANDARDS.

Part I, Metals, 1002 pages; Part II, Non-Metals, 1298 pages; Index, 124 pages, 6 by 9 inches. Illustrated. Philadelphia: 1933: American Society for Testing Materials. Volumes I and II: cloth, \$7.50; half leather, \$9 each. Together, cloth, \$14; half leather, \$17. The Index is supplied on request.

This compilation of the American Society for Testing Materials Standards is published every three years. It brings together all of the standard specifications, methods of testing, definitions of terms, and recommended practices adopted by the society. These standards are assembled in a sequence determined by the materials or products to which they apply. Volume I covers metals;

Volume II, non-metal materials such as coal, timber, paints, etc. There is a subject index in the back of each volume, and a separately published combined Index which includes also the current tentative standards in any given year; this is published annually in pamphlet form.

WOOD SHINGLES.

Red Cedar, Tidewater Red Cypress, California Redwood. Second edition. Commercial Standard CS31-33. 17 pages, 6 by 9 inches. Pamphlet binding. Washington: 1933: U. S. Department of Commerce, Bureau of Standards. 5 cents.

FREEHAND DRAWING SELF-TAUGHT.

By ARTHUR L. GUPTILL. 135 pages, 8¾ by 11¾ inches. Profusely illustrated. New York: 1933: Harper & Brothers. \$3.50.

Arthur Guptill has been teaching for twenty years or more at the Pratt Institute, Brooklyn, but with the publication of his books, the expansion of his student group has become very wide indeed. The reason is that he teaches as convincingly through the printed word and its supplementary diagrammatic sketches as he does in the studio. The purpose of the present volume is to bring together in one place the fundamental principles of illustration as spread over the various media. There is an appendix containing illustrations from the work of many of our best known contemporaries with pencil, pen, and brush.

PLANNING AND NATIONAL RECOVERY.

Planning Problems Presented at the Twenty-fifth National Conference on City Planning. 158 pages, 6 by 9 inches. Philadelphia: 1933: William F. Fell Company. \$3.

Here are brought together the papers and records of miscellaneous discussions of the conference held at Baltimore, October 9 to 11, 1933, with the American Civic Association. Among those who made addresses were: Alfred Bettman, Hon. Harold L. Ickes, Frederic A. Delano, Dr. Arthur E. Morgan, Earle S. Draper, Eugene H. Klaber, Harland Bartholomew, and Robert D. Kohn.

THE MEDIÆVAL MASON.

By DOUGLAS KNOCK and G. P. JONES. 294 pages, 5½ by 8½ inches. Printed in Great Britain. Manchester, Eng.: 1933: The Manchester University Press (Macoy Publishing and Masonic Supply Co., 35 West 32d St., New York City). \$5.

The status of the mediæval mason in England, and his contribution to its architecture has always been one of those subjects, tinged deeply with romance, of which we knew too little. There is not very much of the romance captured in this careful study. The authors, being concerned mainly with economics, deal chiefly with that side of stone building. Nevertheless, one can and will read between the lines much more than appears from the building accounts and other manuscript records relating to the mediæval monuments.

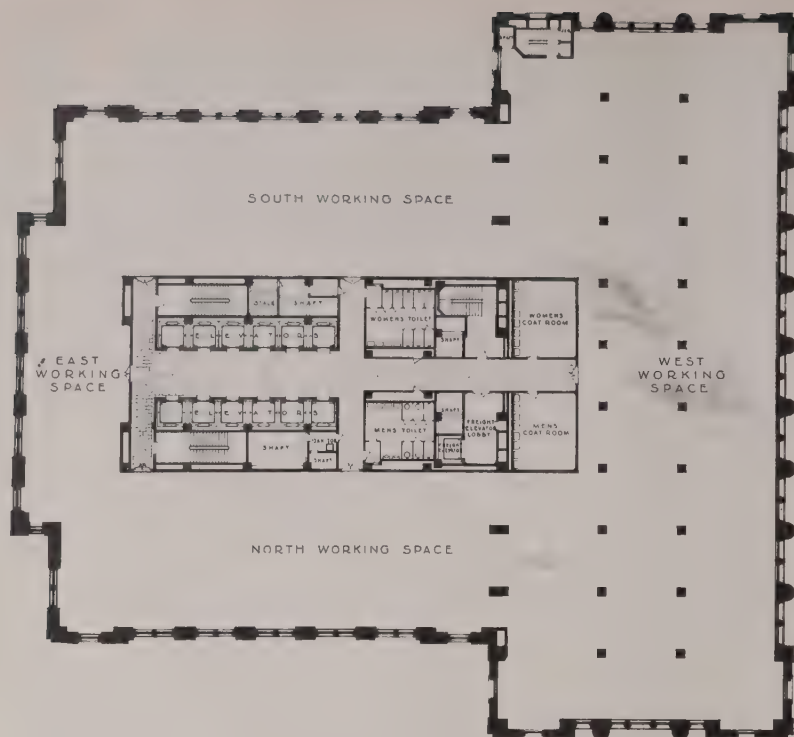


Photographs by The Copeland Studio

The creation of an addition to the insurance company's building at Sixth and Walnut Streets, Philadelphia (Edgar V. Seeler, architect), presented an interesting problem, not only as to its intimate relationship with Independence Hall, but because of the monumental scale and sturdy construction of the original building. Nothing was to be done which would take away from the importance of the corner building, and, moreover, the old building was required to function until the new building had been completed. The new building, following the old structure, has exterior walls of Maine and New Hampshire white granite. All window frames are of solid bronze

ERNEST JAMES MATTHEWSON, ARCHITECT

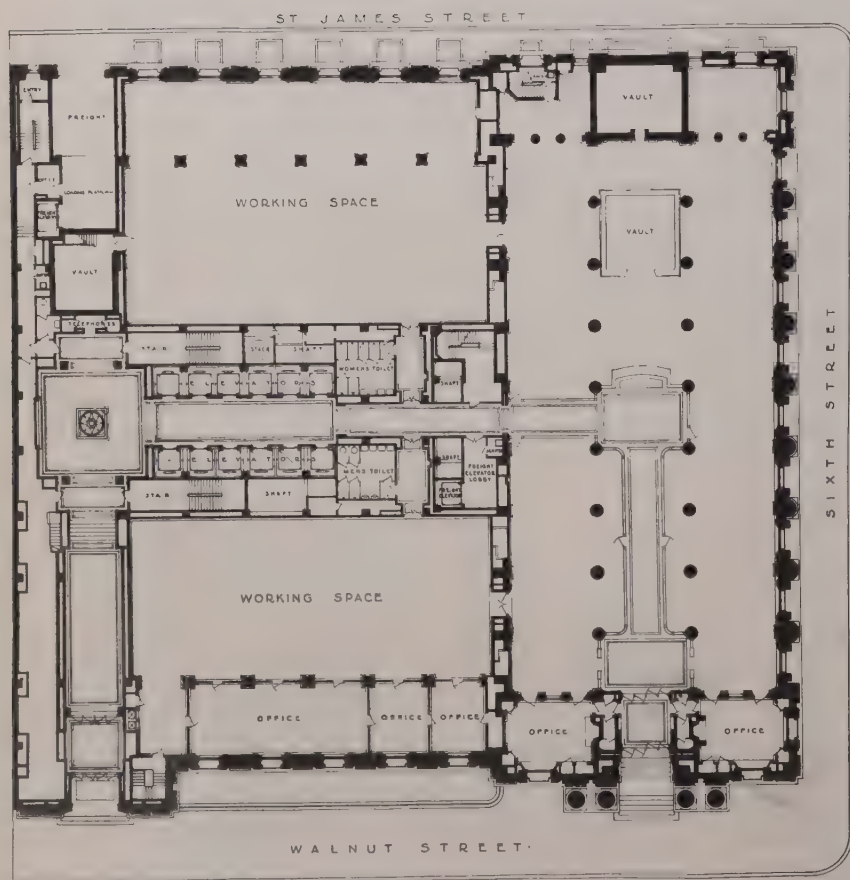
Penn Mutual Life Insurance Building, Philadelphia



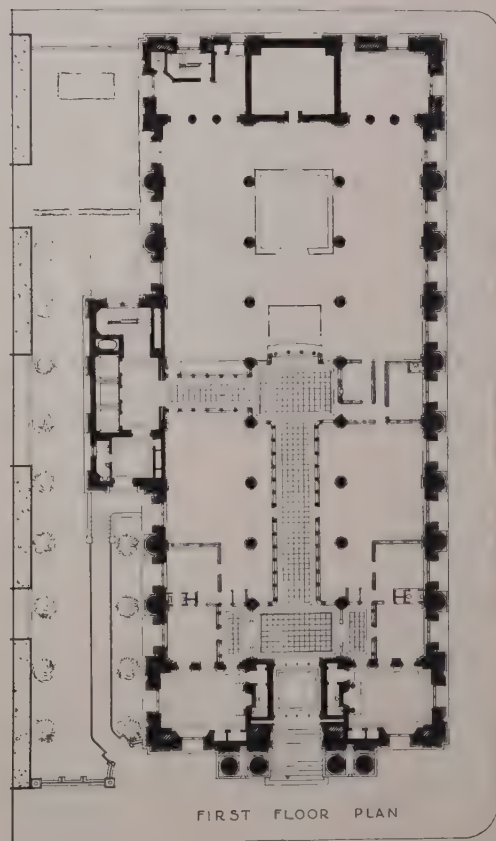
TYPICAL FLOOR PLAN
SHOWING OLD AND NEW BUILDINGS

As this typical floor plan at the left indicates, the wall between the old building and the new has been removed, creating one large area with free usable floor space of approximately thirty thousand square feet

Below is the late Edgar V. Seeler's first-floor plan of the original building. The projecting bay on the east side, containing the passenger elevators, added to the difficulties of the problem, since the final solution provided for the almost complete envelopment of this service wing. In order to construct the new building about this wing without interrupting service, four cantilever trusses, each one story in height, were used to extend out over this space and support the steel work for the new building above



FIRST FLOOR PLAN
SHOWING OLD AND NEW BUILDINGS



FIRST FLOOR PLAN



The lower part of the addition follows closely the architecture of the old structure. Beginning, however, with the third story, the walls are set back, avoiding incidentally the robbing of this east side of the old building of its outside light

◀ ARCHITECTURE ▶



Looking east from the elevator corridor towards the mural painted by N. C. Wyeth—William Penn, man of vision, courage, action



Doorway to the vice-president's office, which, together with those of other executives and the Board, is on the seventeenth floor

Below, the Board Room, looking west. The woodwork is in a natural-finish mahogany, maintaining the traditions of the company in its earlier offices. Any radical departure from classic precedent was felt to be unwise in view of these traditions and the geographical location of the site





Doorway to the president's office. Here the wood-work is of walnut above the marble base in black and gold



Looking north from the main lobby. The large bronze doors are closed, obstructing the view that one usually has on this axis of Independence Hall

A private dining-room on the eighth floor. The walls are painted a putty color, the floor of walnut inlays. Six wall panels represent Independence Hall, Girard's Bank, the Philadelphia Library, the first home of the Penn Mutual, the Chew house, Germantown, and Christ Church





The president's office, the woodwork of which is in natural mahogany with a wax finish. The floor is of teak



The vice-president's office, the woodwork of which is of walnut in a wax finish, with floor of English oak

Below, the officers' dining-room on the eighth floor, finished in koko wood



1—MATERIALS IN GENERAL

THE materials of which plaster consists must be free from all foreign matter in order that the resultant work be of good quality. The architect should describe them as meeting practical standards that would be acceptable rather than as an ideal of which he might have a vain hope of securing. Bear in mind also that water enters into plaster work and that it should be free of salts and organic compounds. This should be mentioned in the specifications.

Sand must be clean—and nothing but sand. To illustrate: A certain job was being plastered at a time when a strike of sand men was in progress. Time was of the essence. The entire work was being held back because no sand was available. The boss plasterer brought to the job sand that had been used as ballast in a boat previously carrying oats. To the feeble remonstrances of the architect's superintendent he replied that "sand was sand." But the oats didn't know they were supposed to be sand. Hardly had the moist white coat been applied, when small shoots were observed coming out of the plaster. Due to the ignorance of the oats it was necessary for the plasterer to remove a considerable part of the plaster.

Salts in sand are very likely to cause deliquescence (the absorption of moisture from the air) or efflorescence (the latter both in the sense that the plaster may lose its structure, and that a powder may be left on the surface when the water evaporates). If there is salt known to be present in the sand to be used, it is well to call for the sand to be washed. There are simple tests for determining organic matter, salt and loam content of sand, full information of which may be obtained from recognized authorities, or from the Portland Cement Association. The coarseness of the sand should be determined by the A. S. T. M. specification for sand for plastering.

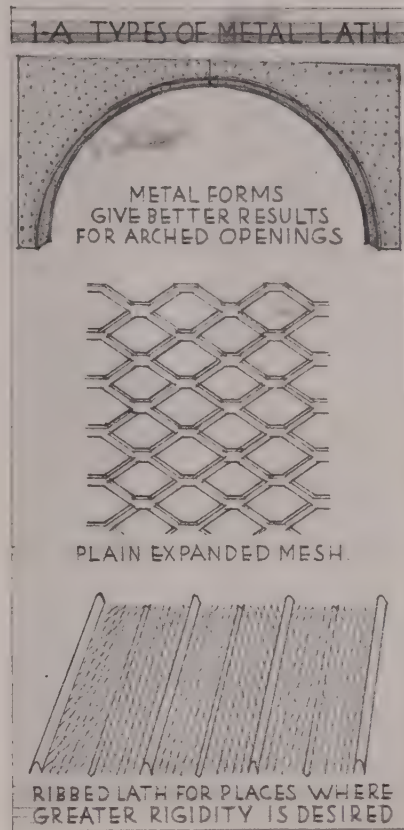
If lump lime is used it should be well soaked and allowed to stand for at least two weeks before using. In cities where time and space for dumping materials are an important item, this form of lime is seldom used nowadays.

The patent plasters now in general use come both "neat" and "neat-fibred." Also some of them come already sanded, but for the large job the transportation costs on

Better Practice

By *W. F. Bartels*

PLASTERING



the latter would be prohibitive. On the small job it might be worth while, particularly if the sand in the neighborhood did not come up to the standard.

Bond plaster is a special preparation used on concrete work before the other plaster is applied. Its duty is, of course, to provide a good bond for the subsequent coats. In spite of arguments against it, it is far better to keep on using it and specifying it until the manufacturers of the patent plasters advise against its use. As yet they do not seem to be willing to go on record in advising its omission. Unfortunately their salesmen will at times (under pressure from plastering contractors) say that its use is not entirely necessary.

Cement plaster may be made of any of the various kinds of cement, provided full cognizance is given to their various values and properties.

Under this heading might also be listed Keene's cement, but it must be understood that it is by no means a Portland cement.

When hair or jute is specified, it should be remembered that, as important as the kind and length of hair or jute fibre is the mandatory requirement that it must be evenly distributed throughout the mixture.

The architect should never fail to specify by name the brand of finishing lime he wishes to be used. Some are undoubtedly superior to others, and this, naturally, is reflected in their prices. Their smoothness and plasticity will be determinants in giving the kind of job the architect has in mind.

Plaster board is well worthy of consideration, whether it is to be used in important places, or whether much is to be used even in unimportant places.

It is far greater economy for the owner, and in many cases for the contractor, if wood lath is used, to use a good grade of it. But it is up to the architect to specify the kind he wants. To have to cull out unfit members is a waste of time and material. It may be difficult for the architect to select wood lath from a bundle, but it should be borne in mind that even a layman can detect poor lath when nailed in place. So it behooves the architect not to leave himself open to criticism in this respect.

Metal lath should be painted, dipped, or otherwise protected from oxidation. It is preferable to use galvanized metal lath if possible to do so, particularly on exterior work.

A contractor once had an alteration job on a bank. The work necessitated cutting into the wall at one point. Looking into the hole cut by his men he was surprised to see that the furring was at some distance from the wall. In fact, it was far enough away so that a man could squeeze between it and the wall. Being curious, he edged his way behind the plaster to inspect it. He would not have been surprised to see that the mesh had not been well embedded in the plaster, because that was a fault all too common, but he was surprised to find *no mesh at all*. The supporting material had completely disintegrated and the plaster was standing alone. It was only necessary for him to bring a bank official behind the scenes to get an additional job for his firm.

Base screeds, corner beads, pic-

ture moulding, and arch forms, as well as other aids to good plastering, should be carefully selected before the work is started (Fig. 1-A). It tends to expedite the job and is more satisfactory to both owner and contractor.

Much of the steel for furring on the market today is not of good quality, and care must be exercised in both the specification and the actual selection. Then, too, it is well to investigate the difference between the foreign and domestic products. Often one is specified and paid for, but the other is substituted.

2—DESCRIBING WORK

It is hardly possible to place too much emphasis on the necessity for being specific about the work to be done. Nothing should be left to any one's imagination. A little additional time spent in describing the places to be plastered and those to be omitted will readily be compensated for by the cost-saving in the bids. The places to be wood-lathed, those to have metal lath, places to be plastered with cement, those to be plastered with Keene's cement, all should be precisely described. Specify the number of coats to be applied—generally it is three on lath, and two on masonry. On a certain large job the specification (whether it was right or wrong) called for three coats throughout on both lath and masonry. There was no other way but for the superintendent to demand the three coats, particularly as the architect would give no definite answer to the problem. The plasterer solved the problem very easily, however. He had all brown mortar on his board. When it was demanded that he apply three coats, he applied one trowelful first, saying, "There's the first coat." Taking another trowelful and going over the first he said, "And there's the second coat." This was a fair measure of his regard for the specification.

Extras are not exempt in plastering, any more than they are in any of the other trades. They must be provided for—and against. Sometimes there may be justification for an "extra," but careful plans and specifications on the architect's part would often anticipate most of them. The old question of patching continually rears its head. Who is to pay for it, and how much is the plasterer required to do? On one job the patching was on a time-and-

material basis. This was ruinous, or would be, to a private individual. The men doing the work would start at the top in the morning and would not reach the bottom by night. Each day it was the same story. Some of the places to be fixed had all the earmarks of having been hit with a plasterer's plank, but of course this could not be proven, and the owners paid for the patching until the men got tired of their job!

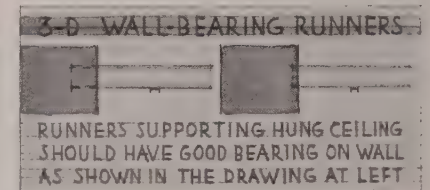
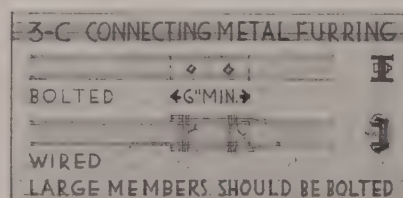
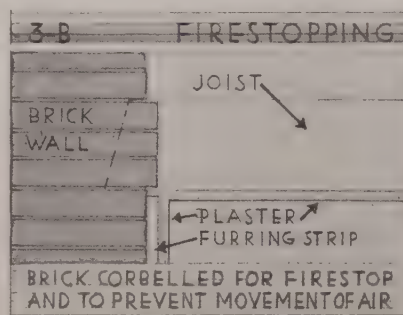
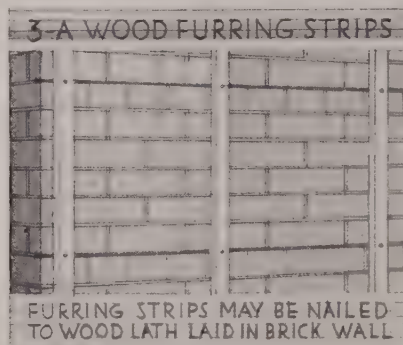
A schedule of plastering is a good thing to have, providing it is intelligible to every one on the job, but to hand out one which only its author can understand, is worse than none at all.

3—CONSTRUCTION AND INSTALLATION

Furring may be of many forms: wood or metal strips; self-furring lath; plaster board; tile, split, or free standing; and various other methods. Wet walls are not to be dismissed as unimportant, as every building manager knows. Furring does not eliminate wet walls, but it does help considerably to insulate against heat and cold. Wood furring is generally nailed to brick walls by

means of cut nails. Then, too, sometimes wood lath are inserted (Fig. 3-A) in the brickwork so that a nailing base may be obtained. The furring strips themselves are run vertically, and so it is well to provide a stop (Fig. 3-B) at certain places, such as at floor lines, so that there is no circulation of air back of the plaster. Where fire stops are required, as in brick and frame construction, they will take care of this matter.

Metal furring should be either bolted or wired together. The latter is of course the cheaper. Large members should invariably be bolted (Fig. 3-C). If small panels are to be wired, it should be stated, and the way the architect wishes it done, for otherwise the wiring may be woe-fully weak. Framing around access doors is a particularly weak point in metal lathing, and the architect should not hesitate to give details as to how he desires this work done. There are various ways of fastening the runners. If they are to be inserted in the wall, it should be stated how far they are to be embedded. If this is not done the architect, visiting the job later, may find them hanging on the wall by only the proverbial hair (Fig. 3-D).



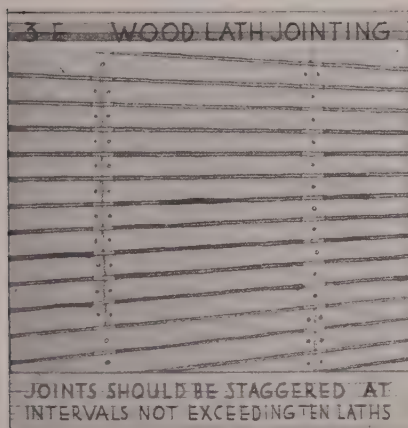
If it is to be entirely a hanger job, with no supports on the walls, it should be so stated. Any special hung furring members should be detailed. In short, seemingly small details should be gone into thoroughly in plans and specifications in order to avoid large arguments on the job later.

A quotation from a specification (for a well-known job) will perhaps better illustrate the point. "All of the above furring shall be of suitable size steel having ample strength well secured to steel construction and masonry." What an opportunity for the plastering contractor! And if any one supposes the successful bidder did not take advantage of this ambiguity, he is badly mistaken. Frequent—in fact, almost daily—were the disputes as to what constituted "suitable size steel." Some was undoubtedly of inadequate size;

although it might have been able to carry the load imposed on it, it could not have done so without bellying and sagging. Then arose the dispute as to what was intended by "well secured." One or two ties here and there, was the plasterer's idea of what this meant.

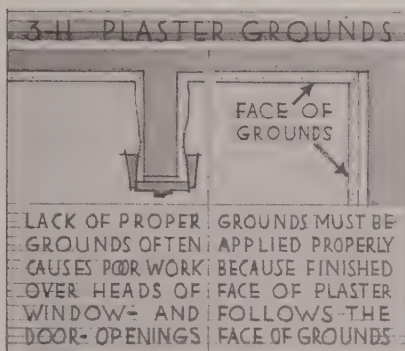
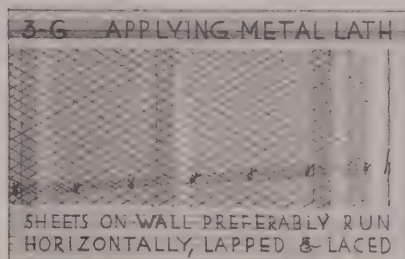
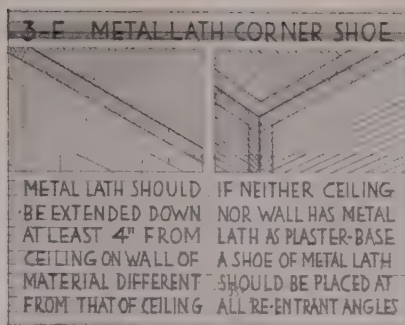
When plaster boards are called for the contractor gives them little attention. If there is no section in the code applicable to their installation, they should be called for to be installed with broken joints, and be nailed every four inches on ceilings, six inches apart on walls, while over boilers, or other places likely to cause buckling, the nails should be three inches apart. The nails themselves should be at least $1\frac{1}{4}$ " long and have heads at least $\frac{3}{8}$ " in diameter.

The New York City Plastering Code calls for a minimum distance between wood lath of $\frac{1}{4}$ " and a maximum of $\frac{3}{8}$ ". Also, every ten laths must have broken joints, and the lath on the ceiling must run in one direction only. All these are



precautions that may profitably be observed (Fig. 3-E).

Wire lath should never terminate against a wall. It should be turned down at least four inches. If this is not done a shoe of metal lath should be provided extending out on the ceiling and down on the wall the above mentioned four inches. This shoe might well be specified for rooms where wooden lath are used. Used in the corners it prevents the ugly cracks so prevalent there (Fig. 3-F). Where different materials meet, such as a plaster block wall with a concrete arch, it is better to have a shoe of metal lath fastened in the corner to prevent the cracks which are otherwise sure to appear, owing to the settlement of



the wall or other causes, such as plaster shrinkage. The same is also true of vertical corners where the adjoining materials are of different nature.

If the edges of the metal lath sheets do not come under a beam, or some other means of support, it is advisable to have them laced together every six inches. Sheets on vertical surfaces are preferably run horizontally, with the higher sheet always lapping the lower so that the plaster will not turn the edge down if by chance it does not happen to be well secured (Fig. 3-G). All mesh should be overlapped about one inch. If the supports are more than twelve inches apart, ribbed lath for the ceiling should be called for.

It might be thought that there would be no need to call a plastering contractor's attention to the fact that corner beads should be perfectly plumb. But there is. It is also necessary to call his attention to the fact that they must be well secured. All too often does the lather

find the masonry hard and the beads difficult to nail to cement work, so straightway he proceeds to forget the specification and leaves out most of the fastenings.

Then there is the matter of grounds. The carpenter will omit them if possible, and the plasterer will blame this omission if his work is not true (Fig. 3-H). If needed, the grounds should be specified and required, or else omit them and say so.

There are several things the architect might incorporate in his specification, not only in fairness to his client, but in fairness to the plasterer. First, the latter should be obliged to take precautions so that his work will not damage other work or materials in the building. This will take into account the covering of the windows (if they have been glazed), so that they will not become scratched. Then, the radiators must be adequately covered, not by simply putting a board across the top, but in a manner that will not leave a grand accumulation of plaster between their columns or fins when the plastering is done. The plasterer should be strictly prohibited from mixing any of his materials on marble or terrazzo floors. In fact, he should not use any floor for mixing his materials, but if not forbidden he will do it and then, if caught, will attempt to prove that he had a layer of sand under his material.

Definite mention should be made of scaffolding. Sometimes the general contractor furnishes those over a certain height, but it would seem better policy to have the plasterer do all his own scaffolding.

If the plasterer is told that the hoists are at his service (in the case of large buildings), then woe be unto the job. No one else will ever be able to get near those hoists. A certain definite time should be allotted for his use.

An excuse often advanced where it is necessary to provide artificial light, is that the lights were not furnished. Outlets should be provided, but the plasterer should be called upon to furnish his own trailers and maintenance.

Cleaning up after plastering is an item to be considered, even in the small house. It should be thoroughly understood who is to do it.

Plastering should never be done in freezing weather. If it is to be applied on concrete the latter must be clean of grease and laitance. The

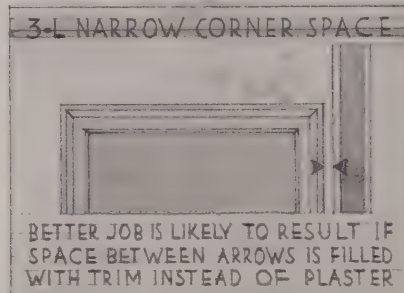
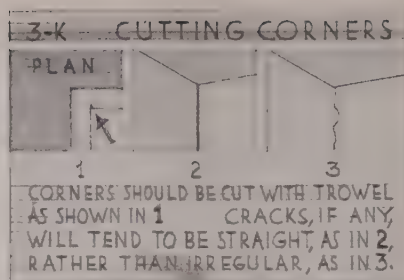
plastering contractor should be required to get a written consent before he proceeds with his work, otherwise an unoffending but slow plumber may be caught without his pipes in their proper positions.

Gypsum plasters seem to be preferable on gypsum blocks, under actual tests. Cement plasters, used for the first coating, should have some lime in them; otherwise they will be "short" and be hard to put in place. If dotted work and an unusual number of screeds are desired, they should be called for, otherwise the plasterer will probably use his eye instead. It might be mentioned in passing that because of their quick-drying qualities the gypsum plasters in recent years have developed considerable popularity.

Scratch coats should have a proper amount of hair or jute fibre as called for by the manufacturer of the plaster. And the plaster should be mixed to such a consistency that it does not fall off the lath, piling up behind it and presenting the danger of damp walls by contact with the outside walls (Fig. 3-I).

The brown coat will not be of such a rich mixture as the scratch coat, since the more sand there is in it the less shrinkage is likely to take place. However, this does not mean that the sand is to be in such preponderance that after the white coat is applied and an accidental hole put in the plaster, the brown coat will run out—as it did in the case of one large building in New York.

It is of course desirable that the brown coat be screeded and dotted in order that the white coat will not vary too much in thickness. Even if called for, this is seldom done over windows, as the plasterer firmly believes that no one will notice the difference, and in many cases he is



correct in this premise. If beam soffits (where the beam is concrete) are to be brown-coated, it should be so specified; otherwise the plasterer will refuse to do it in New York on the plea that it is not customary. And indeed the need for it seems slight if the bond coat is used to bring the soffits to the proper level.

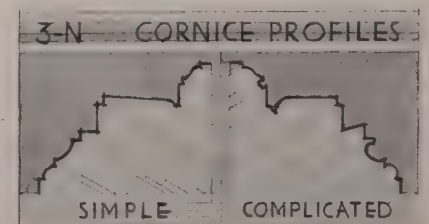
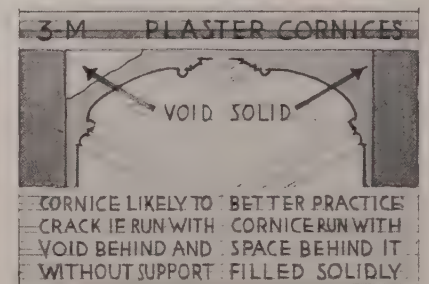
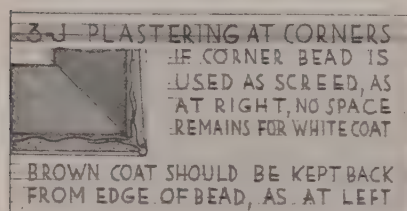
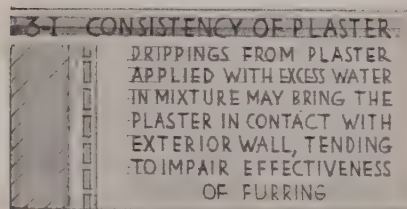
The brown coat should not be run out to the edge of the corner bead as is so often done, but should be kept back so that there is room for the white coat when the time comes to apply it (Fig. 3-J). It is the part of wisdom to call for the inside corners to be cut with the trowel, so that any subsequent cracking may be in a straight line in the corner instead of wriggling like the map of a river as cracks too often do (Fig. 3-K). The brown coat should be allowed to dry out before the white coat is applied. In fact this is more economical in the long run. If the white coat is applied before the brown is thoroughly dry it will take much longer to dry than if the brown coat had been allowed to dry thoroughly first.

After the brown coat has dried out it should be wetted before the white coat is started. This is to eliminate the so-called "suction." It will tend also to eliminate the chance of fire cracks in the white coat. Specifications vary in the proportions of plaster of Paris, but the building code of New York City calls for two parts of lime putty to one part of plaster of Paris. It is well to specify what retarders are to be used, and then on the job to insist that only they are used, because

otherwise the men will bring along their own assortment of what they think makes the best retarder. Care should be given to other items concerning the white coat: the temperature should be as even as it is possible to regulate it; strong currents of air should not be allowed to dry the work out too fast.

Too much emphasis cannot be placed on the fact that the white coat needs plenty of attention and supervision; otherwise more cracks will show up when the walls are sized than it was thought possible to have. The corners of the rooms should have the white coat cut, as was mentioned for the brown coat, for the same reason. Instead of calling for a small strip of plaster between a piece of trim and a wall, it is better that this space be filled with a piece of trim (Fig. 3-L). A narrow area cannot be troweled properly and will crack readily.

Models for cornices and other ornamental work should be called for, to be submitted and approved. The plasterer should be called upon to see that there is not a hollow space left behind the cornice, because eventually this will result in large, open cracks, difficult and expensive to repair (Fig. 3-M). If the cornice is of large size the lath should roughly follow its outline to avoid large chunks of plaster which will also cause cracks by their shrinkage. It is well also to let the plasterer know which parts are to be "run," and which he may "stick up" (Fig. 3-N). All help possible should be given to him on ornamental work, because the success of this will be in direct ratio to the architect's personal interest.

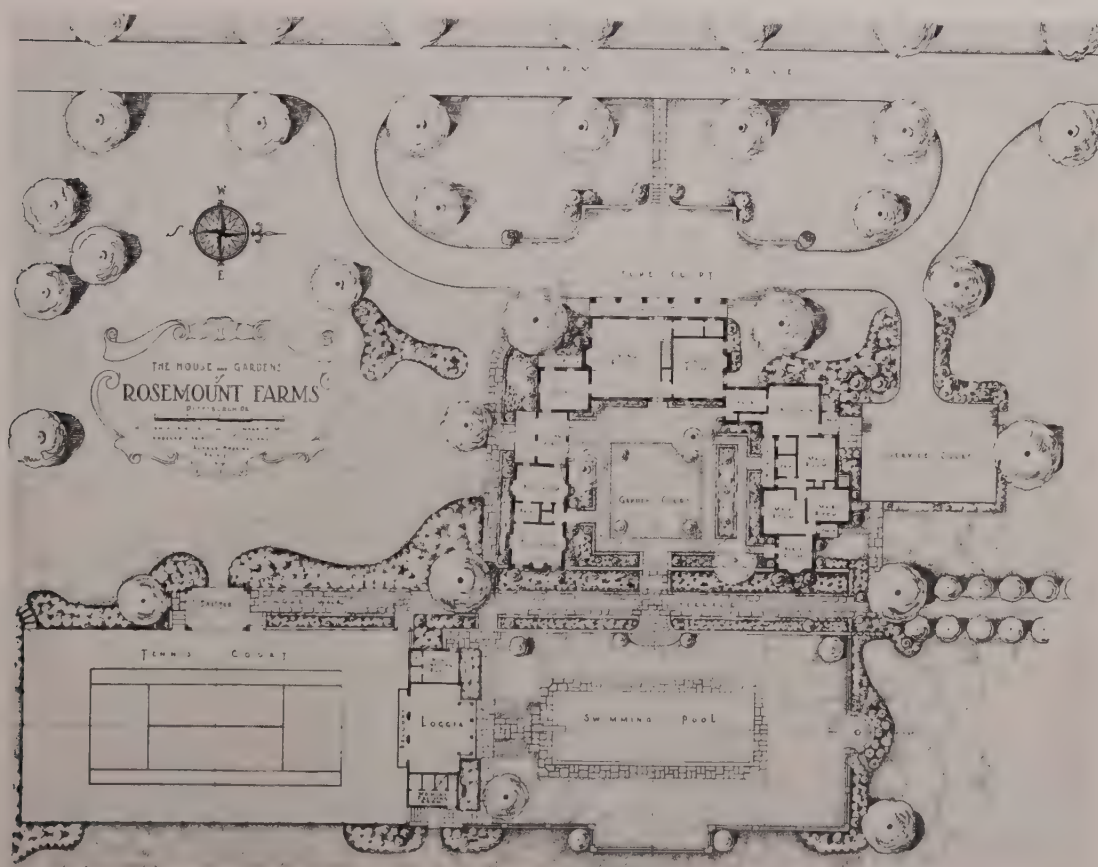




Photograph by Mary Fisher

House of Howard Heinz, Pittsburgh, Pa.

ALFRED HOPKINS, ARCHITECT; PITKIN & MOTT, LANDSCAPE ARCHITECTS





Photographs by Mary Fisher

*The garden court as seen from beyond the swimming pool
Looking east along the south wing, with the living-porch in the
middle of the picture*



« ARCHITECTURE »



Photographs by Mary Fisher

The house is built on a hill top originally devoid of trees. It was designed mainly for week-end visits of the family and guests

The south wing as seen from the garden court, looking east. This shows the entrance to the boys' quarters





The north wing as seen from the garden court, with the entrance to the kitchen screened by this vine-sheltered porch

Photographs by Mary Fisher



The swimming pool terrace has been kept open and free of planting excepting the area between the walk and the pavilion.

The principal view is to the east over this terrace across a wooded valley to another line of hills opposite

Looking through the living-porch towards the garden court. The south wing at the left is used by guests when the boys are away





Photograph by Robert Tebbs

The garden court entrance to the nurse's room. There is an interesting and very simple cornice treatment indicated at left

« ARCHITECTURE »



Photographs by Robert Tebbs

Fireplace side of the living-room ; the door at left leads to the den

The dining-room, looking toward the southwest corner

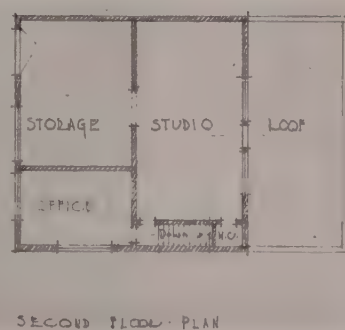
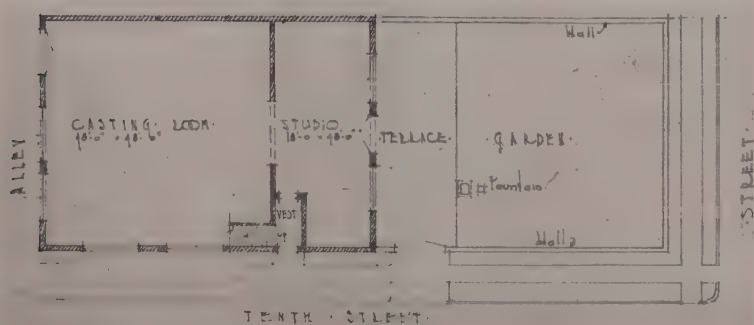




Parducci Studios, Detroit

The Parduccis are sculptors who have designed their own workshop, building the walls throughout of twelve-inch cinder blocks. A coat of cement paint covers the block wall outside and inside. Later, a cloister is to be built along one side of the garden, its roof framed with rough oak, covered with a handmade tile. Mr. Parducci says that the new work will be done as this was—"following the inspiration of the moment, based upon fitness rather than upon effect"

Photographs by Elmer L. Asleford





The cornice was cast on the job by the sculptors themselves in plaster moulds, using an aggregate furnished by the block manufacturers. Each of the little grotesque heads was individually modelled.



This cornice has much the appearance and color of very old stonework

The ground floor of the building is of concrete, the second floor and roof of mill construction

Tuesday, January 2.—Dropped into William A. Mackay's temporary studio in the building where they store Metropolitan Opera scenery. Mackay is painting the murals for the Roosevelt Memorial in New York City, a project which he won in competition. He and his four or five assistants were working on a platform not over six feet wide, on both sides of which the murals were stretched upon frames capable of being raised or lowered through slots in the floor and ceiling. The murals are nearing completion, and promise a result that will be stimulating intellectually and artistically to all for whom the career of Theodore Roosevelt had special significance.

Wednesday, January 3.—Henry Wright tells me that he has established a working laboratory at 63 Fifth Avenue, New York City, in which a group of younger men, some of them members of the recent summer school, will carry on their analytical studying of housing problems, and render a consulting service. It is somewhat startling, though unquestionably logical, to find architects putting a new process in advance of what we know as design. Throughout the early stages of a study for any particular site and set of conditions, the lines on paper are, for the most part, figures—costs of construction and maintenance, interest on investment, rentals, and the like—the plans and elevations of a projected housing being of the simplest, crudely diagrammatic, form. In other words, there are several other important factors relating to housing which have to be settled before one starts to make house plans and elevations.

Thursday, January 4.—Some of the Western realists are throwing bricks at Charles Keck for using double reins and a Pelham bit on a cowboy pony. Keck's defense is that he got his information and approval from contestants in the rodeo, who not only posed for him, but checked the details of his work. At any rate, Mr. Keck didn't go so far as to include an English saddle.

Friday, January 5.—The length of time required to put the public works program into effect is worrying many people. One recalls the same sort of impatience with the early results, or lack of results, in our war efforts. It uses up a lot of very valuable time in merely getting the wheels started turning. I suspect that most of the blame, if one can call it that, may be laid at the door of the lawyers. The P. W. A. allocates several million dollars to a city for slum clearance and housing, for instance. The lawyers, with a horror of any sort of "pork" dangling before them, draw up the contracts with so many provisions and such iron-clad protection that every one's hands are tied. Or, the lawyers draft the form of bonds that the



The Editor's Diary



city can sell to supply its equity, only to be told that the city cannot issue that kind of bonds because of its own charter. The lawyers draft the form of contract that they would like to have the city offer the builders, and it turns out to be so harsh and one-sided that no contractor will bid on the work. And so it goes. The money is available. The P. W. A. has allotted, and is willing to allot more funds, but the lawyers have wound us all up in a tangle of red tape that seems badly to need a large and sharp pair of executive shears.

Monday, January 8.—Frederick Mathesius told me today that the code for the building industry is on President Roosevelt's desk, where it had been deposited together with all of the minor codes connected with it. The news is that the President has returned to General Johnson the minor codes, retaining for his own study the major codes. I imagine that upon the signing of the building code itself, General Johnson will announce the establishment of the minor codes dependent thereon.

Tuesday, January 9.—The New York Chapter held a luncheon meeting to discuss the architects' code today, a meeting which I missed with regret since it turned out to be, I hear, a spirited debate. Apparently some of the architects have just awakened to the fact that there are such things as codes, and that for some months a highly competent committee of architects has been laboring night and day in the drafting of one that would meet the needs and wishes of the greatest number.

Thursday, January 11.—Down at St. Mary's City, Md., they are beginning the restoration of the historic State House, built in 1676 and destroyed more than a century ago. When the State moved its capital in 1695, the old State House was used as a church and as a county court house. Then the removal of the county seat closed its official life, and it was turned over to the Parish of William and Mary. For more than a century it remained a place of worship,

until it was torn down in 1829, when its old bricks were again laid up in the walls of the present Trinity Episcopal Chapel. Horace W. Peaslee, of Washington, and Crisp & Edmunds, of Baltimore, have planned the restoration.

Saturday, January 13.—I see that Samuel Yellin, fully recovered from his long illness and travels abroad, is making an iron grille and pair of gates for the Chapel of the Holy Spirit in Washington Cathedral. These are to be a memorial to the late Chief Justice Melville Weston Fuller, the gift of his daughter, Mrs. Hugh Campbell Wallace.

Monday, January 15.—A curious problem has arisen in connection with the Public Works Emergency Housing Corporation. The corporation takes over land in some city, and builds thereon new housing. If this means that the Comptroller General is expected to sign his initials to a voucher calling for the payment of local taxes by a federal agency, it would seem that we are hoping for too much. The situation has come up in Cleveland, for instance, and Cleveland can't afford to donate public services without a corresponding tax return. The Housing Corporation is expected to solve this particular problem by contracting with Cleveland for the public services, such as fire and police protection, for state maintenance on a fee basis. This cost, therefore, would not come under the heading of taxes, but would be charged to the operating expense account of the building.

Tuesday, January 16.—Edgar I. Williams has a particularly nice collection of water-colors on exhibition in The Architectural League grill room—work representative of his efforts over a period reaching back as far as 1912.

Wednesday, January 17.—Spent an hour with Mrs. Urban, talking across the late Joseph Urban's work table. The amount and variety of creative work that came from this man's brain and hand are stupendous. In looking over even the fragmentary records of it, one can hardly credit the fact that these things, varying from the palaces for Count Esterhazy to whimsical book illustrations for children, and from the delicacies of an all-white exhibition room to a landscape effect involving a mile of one color, are the work of one man. Incidentally, in speaking of a white room, Mrs. Urban tells me that Joseph Urban answered one who questioned the advisability of such a restriction of color with the remark: "There are twenty-four shades of white."

Friday, January 19.—The Architectural League was positively overflowing today at luncheon when Assistant Secretary of the Treasury Robert was scheduled to speak. This was, I am told,

the largest luncheon in The League's history. Mr. Robert spoke of his hope that the government's architectural and building activities could be used more and more effectively as time goes on, to level out the peaks and valleys of construction activity over the years.

Edward Bruce told of the establishment and purposes of that branch of the C. W. A. which is endeavoring to employ painters and sculptors in the embellishment of public buildings. I was glad to hear that the committee's policy for the present is to concentrate upon easel pictures which may be used in the schools, hospitals, and other public buildings. There will be some permanent murals painted, but only after the sort of careful study and preliminary sketches usual in creating the works of art with which any considerable body of the public has to live.

Incidentally, there were at the speakers' table all the presidents of art organizations in or about the metropolitan centre, and all of them promised the enthusiastic co-operation of their organizations.

Saturday, January 20.—Lee Simonson hasn't much use for the art critics—soothsayers, as he calls them—who decide whether or not an object is art. Nor has he very much greater respect for artists themselves in the judgment of their fellows' work. Manet, according to Vollard, once remarked to Monet: "As a friend of Renoir you ought to advise him to give up painting. You can see for yourself how little aptitude he has for it."

Monday, January 22.—The Consul General of Ecuador writes from New Orleans that his country is particularly interested in the news report that we, in this country, and builders in a few other countries, have been using a brick made of pumice and cement. Ecuador has large deposits of pumice which have not been utilized up to the present time, and the Municipality of Latacunga is particularly interested in knowing whether there is any possibility of exporting their pumice stone either as quarried or in powdered form.

Tuesday, January 23.—In this day when the construction of a new house is front-page news, Omaha's Junior Chamber of Commerce, finding that no individual would build one, built one on its own account. R. F. Hennig was the architect who designed it, and the aim of the Chamber was to focus the public's attention on the opportunities for better homes and better methods of building. Having built the house, they charged admission to inspect it, and had over a thousand visitors a week—which indicates that the aim has succeeded.

Thursday, January 25.—Dropped in at Griffith Bailey Coale's studio to see a large panel of a full-rigged ship just about to drop its sails and anchor in "Safe Harbor," which he is painting. This is the first instance in my knowledge of a mural made before the building in which it is to be hung. Coale knows that he is to have a room eighty-five feet long, with this panel at the far end of it

—no more. The color of the room will be keyed to the painting instead of vice versa.

Tonight the Housing Study Guild met for a general discussion. It is amazing how many intricate problems are opened as fresh, untilled fields. The Guild divides itself into committees, each pursuing some specialized line of study. Some of the findings should be available for publication shortly.

Saturday, January 27.—News of Harry F. Cunningham's resignation as head of the Department of Architecture in the University of Nebraska, comes as a shock. Starting a few years ago with fifty-four students and no department, he has two hundred students now enrolled in search of degrees, with some three hundred as the total registration in the courses offered by the department. I should have thought that such an accomplishment would have been sufficient to satisfy even the idealistic and energetic Cunningham.

Monday, January 29.—It seems rather generally admitted now that we are short in our supply of housing, but until Hege-man-Harris Company's recent survey there seemed to be little data available on other classes of buildings. Their survey covered the field of educational buildings, and indicated a total present need of building to the extent of nine hundred million dollars. Sixty-five per cent of the institutions say that they are in definite need of new construction, the most urgent need being for student housing. Second in importance are libraries, and next in order: fine arts buildings, gymnasiums, class and school room buildings, chapels, laboratories and administration buildings, followed by a wide variety of other and less common needs.

Wednesday, January 31.—Lunched with John Walter Wood, Jr., who was telling me something of his observations as to airports the world over. In mankind's usual blundering way he has, when confronted by the necessity for a landing-field, picked out a clear level space, put up a few hangars and other miscellaneous buildings along one edge of it, and called it an airport. Naturally the complexities of air transportation soon reveal the necessity for skilled planning and foresight. There must be an easy and direct route from other transportation means to the plane; there must be provision for keeping incoming and outgoing planes from crossing; there must be means of providing quick refueling and service, again without crossing other paths; there must be provision for landing up-wind, no matter what direction this happens to be. It is all rather complicated, and our present activity seems to be in large part the scrapping and rebuilding of airports made in too much of a hurry.



A corner of the late Joseph Urban's New York office. The translucent glass panels at the end of the room diffuse the light entering through the usual stock windows

« ARCHITECTURE »

FAVORITE FEATURES

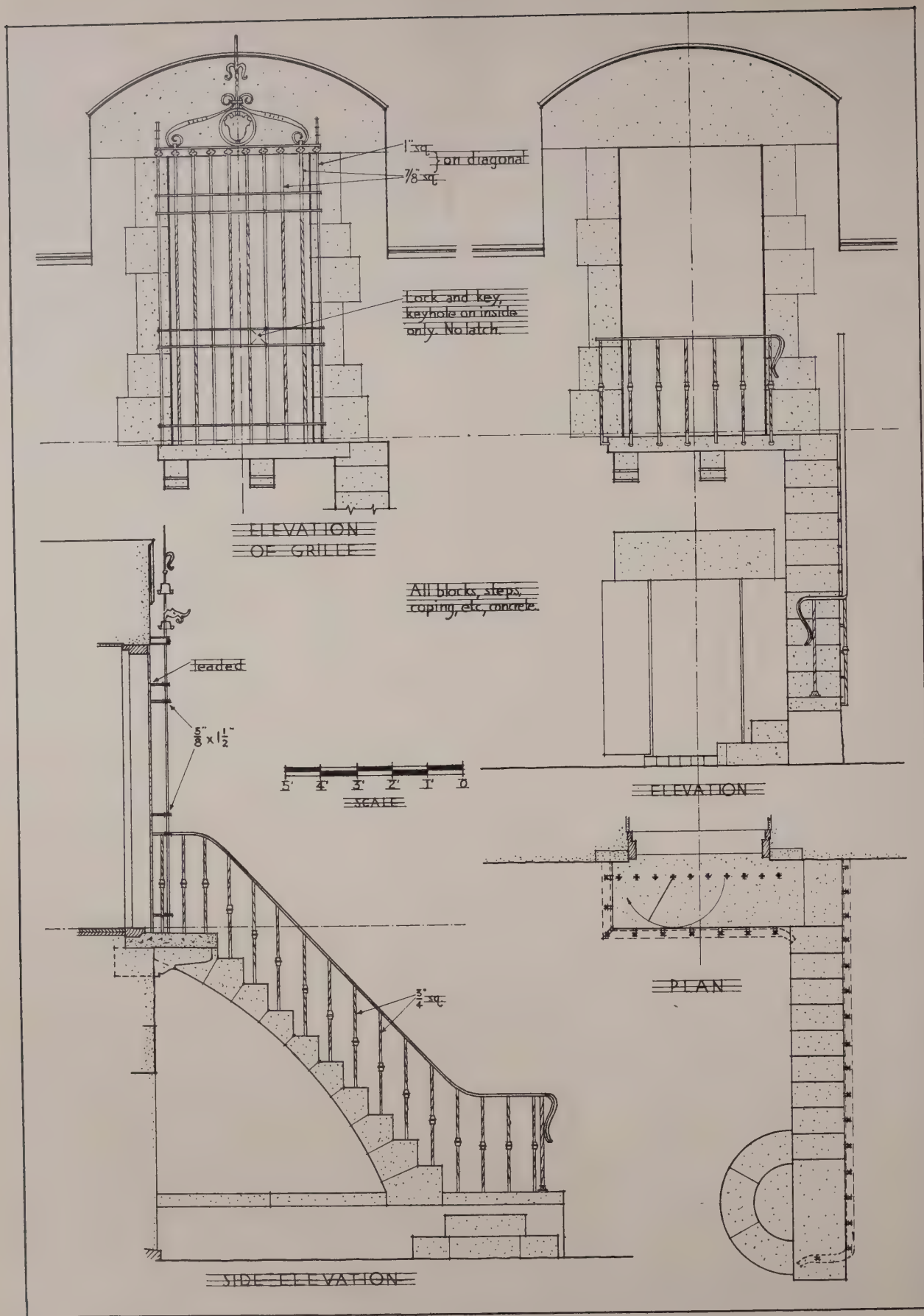


Many of the architect's creations fail to measure up to his expectations. Here is one of a series, however, that satisfy the designers themselves
(Scale details overleaf)

Detail from House of Arthur E. Newbold, Laverock, Pa.

MELLOR & MEIGS, ARCHITECTS

Wrought iron craftsmanship by Samuel Yellin



THE EIGHTY-NINTH IN A SERIES OF COLLECTIONS OF PHOTOGRAPHS
ILLUSTRATING VARIOUS MINOR ARCHITECTURAL DETAILS

ARCHITECTURE'S PORTFOLIO OF FOUNTAINS

*Subjects of previous portfolios are listed below
at left and right of page*



*Below are the subjects of
forthcoming Portfolios*

Modern Ornament

APRIL

Rustication

MAY

Organ Cases

JUNE

Garden Furniture

JULY

Window Heads, Exterior

AUGUST

Spires

SEPTEMBER

*Photographs showing interesting
examples under any of these head-
ings will be welcomed by the Edi-
tor, though it should be noted that
these respective issues are made up
about six weeks in advance of
publication date.*

❖1926
DORMER WINDOWS
SHUTTERS AND BLINDS

❖1927
ENGLISH PANELLING
GEORGIAN STAIRWAYS
STONE MASONRY TEXTURES
ENGLISH CHIMNEYS
FANLIGHTS AND OVERDOORS
TEXTURES OF BRICKWORK
IRON RAILINGS
DOOR HARDWARE
PALLADIAN MOTIVES
GABLE ENDS
COLONIAL TOP-RAILINGS
CIRCULAR AND OVAL WINDOWS

❖1928
BUILT-IN BOOKCASES
CHIMNEY TOPS
DOOR HOODS
BAY WINDOWS
CUPOLAS
GARDEN GATES
STAIR ENDS
BALCONIES
GARDEN WALLS
ARCADES
PLASTER CEILINGS
CORNICES OF WOOD

❖1929
DOORWAY LIGHTING
ENGLISH FIREPLACES
GATE-POST TOPS
GARDEN STEPS
RAIN LEADER HEADS
GARDEN POOLS
QUOINS
INTERIOR PAVING
BELT COURSES
KEYSTONES
AIDS TO FENESTRATION
BALUSTRADES

❖1930
SPANDRELS
CHANCEL FURNITURE
BUSINESS BUILDING ENTRANCES
GARDEN SHELTERS
ELEVATOR DOORS
ENTRANCE PORCHES

1930 ❖
PATIOS
TREILLAGE
FLAGPOLE HOLDERS
CASEMENT WINDOWS
FENCES OF WOOD
GOTHIC DOORWAYS

1931 ❖
BANKING-ROOM CHECK DESKS
SECOND-STORY PORCHES
TOWER CLOCKS
ALTARS
GARAGE DOORS
MAIL-CHUTE BOXES
WEATHER-VANES
BANK ENTRANCES
URNS
WINDOW GRILLES
CHINA CUPBOARDS
PARAPETS

1932 ❖
RADIATOR ENCLOSURES
INTERIOR CLOCKS
OUTSIDE STAIRWAYS
LEADED GLASS MEDALLIONS
EXTERIOR DOORS OF WOOD
METAL FENCES
HANGING SIGNS
WOOD CEILINGS
MARQUISES
WALL SHEATHING
FRENCH STONWORK
OVER-MANTEL TREATMENTS

1933 ❖
BANK SCREENS
INTERIOR DOORS
METAL STAIR RAILINGS
VERANDAS
THE EAGLE IN SCULPTURE
EAVES RETURNS ON MASONRY
GABLES
EXTERIOR LETTERING
ENTRANCE DRIVEWAYS
CORBELS
PEW ENDS
GOTHIC NICHEs
CURTAIN TREATMENT AT
WINDOWS

1934 ❖
EXTERIOR PLASTERWORK
CHURCH DOORS



*Ridgefield, Conn.
Cass Gilbert*



*New York Public Library, New York City
Frederick W. MacMonnies
Carrère & Hastings*

*In a patio garden,
Los Angeles, Calif.*



*Cleveland Museum of Art, Cleveland, Ohio
Chester A. Beach
Hubbell & Benes*





*New York Public Library, New York City
Frederick W. MacMonnies
Carrère & Hastings*



*Beverly Hills, Calif.
Paul G. Thiene
Gordon B. Kaufmann*



*Bloomfield Hills, Mich.
D. Allen Wright*

*Gothenburg Art Gallery, Sweden
Carl Milles*





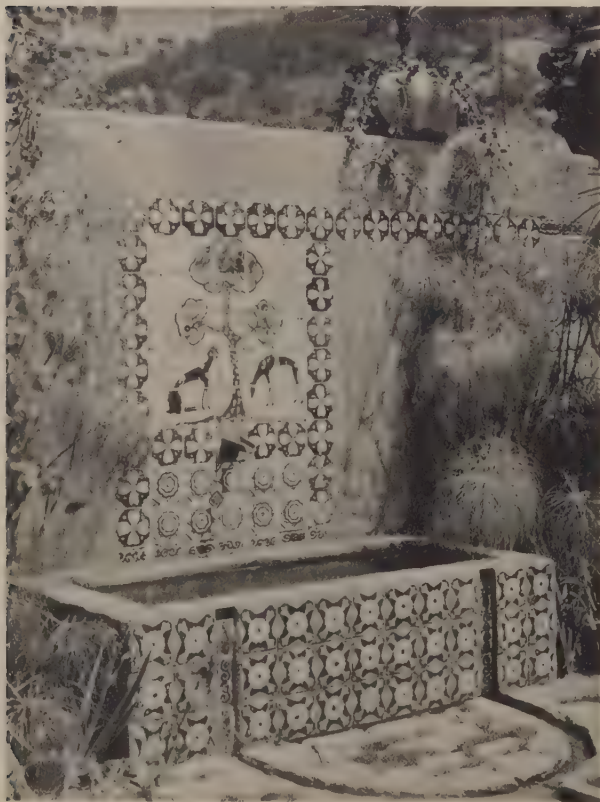
*Narbeth, Pa.
Wheelwright & Stevens*



*Museo Provincial, Cordova
From Eleanor Roche*

*Los Angeles, Calif.
Carleton M. Winslow*

*Cimarron, N. M.
Edward Buehler Delk*





*Lincolndale, N. Y.
Robert Ludlow Fowler, Jr.*

*San Francisco, Calif.
Julia Morgan*



*Leonia, N. J.
Rutherford Boyd*

*Los Angeles, Calif.
Carleton M. Winslow*





*Royal Palace, Barcelona
From Eleanor Roche*

*Fairmount Park, Philadelphia
Beatrice Fenton*



*In a church courtyard,
Chicago, Ill.
Cram, Goodhue & Ferguson ; Howard Shaw*

*Tulsa, Okla.
Edward Buehler Delk*





*City Hall, Waterbury, Conn.
Cass Gilbert*



*Museo Provincial, Cordova
From Eleanor Roche*



*Bedford Hills, N. Y.
Harriet W. Frishmuth
A. F. Brinckerhoff*

*Los Angeles, Calif.
A. E. Hanson
George Washington Smith*





*Villa Reale, Castello,
near Florence (c. 1550)
Niccolo Tribolo*

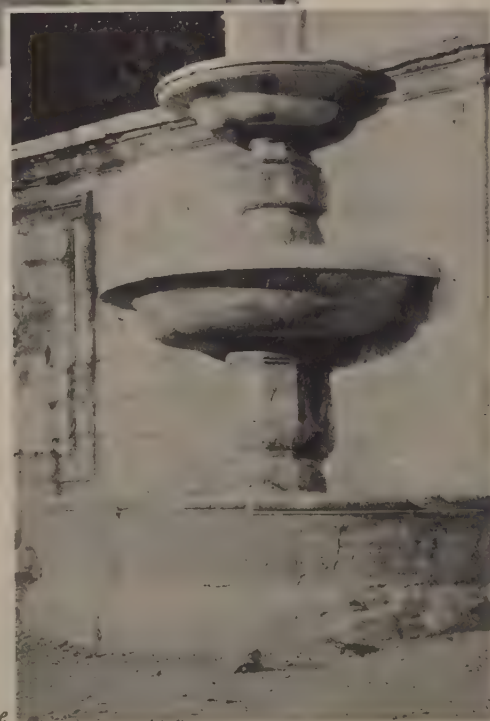
Villa Albani, Rome



*Public
Fountain,
Brescia,
Italy*



Near Le Puy, France



*Photographs from the
collection of William
Pitkin, Jr. and
Seward H. Mott,
landscape architects*

Near Nîmes, France



*Public
Fountain,
Brescia,
Italy*



*Royal Villa, Petraia,
near Florence (c. 1550)
Niccolo Tribolo*



Public Fountain, Ravello, Italy



*Villa Cicogna, near
Bisuschio, Italy*

*Photographs from the
collection of William
Pitkin, Jr. and
Seward H. Mott,
landscape architects*

*Near Limoges,
France*





*Southampton, N. Y.
Albert Herter*



*Elkins Park, Pa.
Tilden, Register & Pepper*



*Brookville, N. Y.
Bottomley, Wagner & White*

*New York City
Delano & Aldrich*



*Los Angeles, Calif.
Gordon B. Kaufmann*



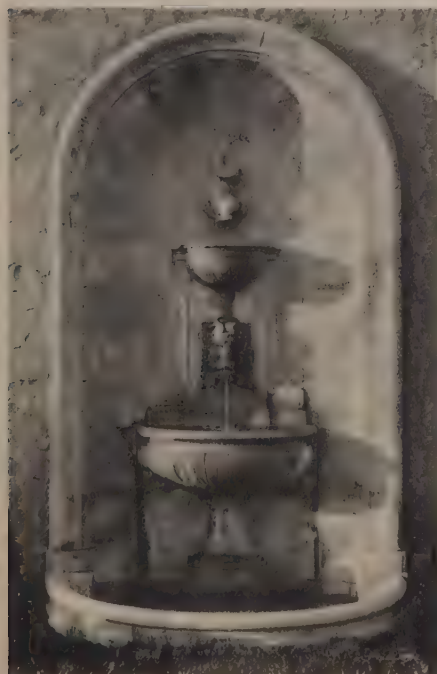
*Wilmington, Del.
E. William Martin*



*Newark, N. J.
Francis A. Nelson*

*Saratoga Springs, N. Y.
Charles W. Leavitt & Son*

*Kansas City, Mo.
Edward Buehler Delk*



*Los Angeles, Calif.
Morgan, Walls & Clements*





San Francisco, Calif.
Bakewell & Brown; Sylvain Schnaittacher
Pasadena, Calif.
John D. Atchison



Bedford, N. Y.
Robert Ludlow Fowler, Jr.
Middlebury, Conn.
Agnes Selkirk Clark





*Vienna, Working Men's Housing
Municipality of Vienna*

*Bedford Hills, N. Y.
A. F. Brinckerhoff*



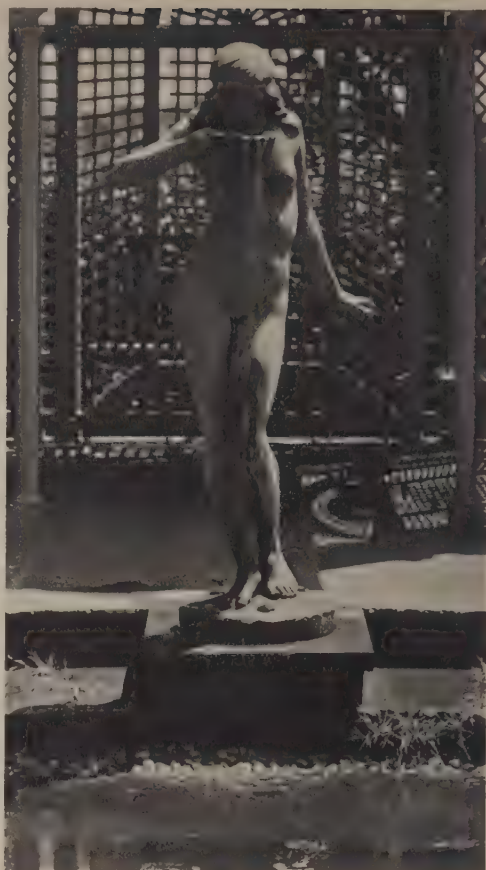
*Los Angeles, Calif.
Morgan, Walls & Clements*

*Hollywood, Calif.
Carleton M. Winslow*





*Granada
From Eleanor Roche*



*New Rochelle, N. Y.
Edward McCartan
Frederick G. Frost*

*Freer Gallery,
Washington, D. C.
Charles A. Platt*



*Oklahoma City, Okla.
Atlee B. and Robert M. Ayres*





Sculpture Exhibition, San Francisco
Beatrice Fenton



Las Turas Lake, California
John Byers



Parque Montjuich, Barcelona
From Eleanor Roche



Villa Philmonte
Edward Buehler Delk





*Pasadena,
Calif.
Leslie H.
Lippiatt*



*Hollywood,
Calif.
Pierpont and
Walter S. Davis*

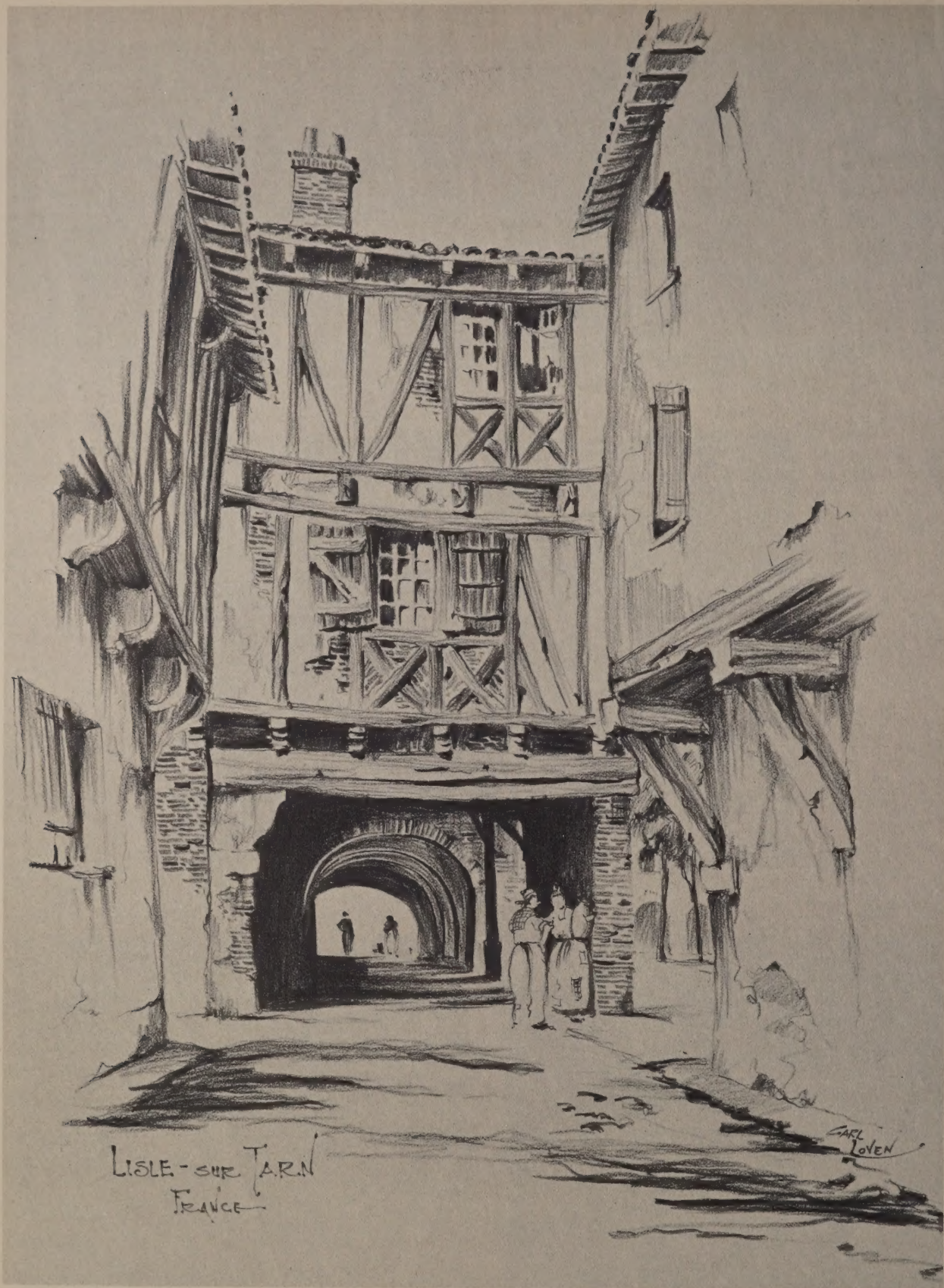


*Moylan, Pa.
William W.
Price*

*Rockefeller Center, New York City
Paul L. Manship*

*Scarsdale, N. Y.
Charles W.
Leavitt & Son*





LISLE-SUR-TARN, FRANCE
From the drawing in pencil by Carl Loven